

DEPARTMENT OF NATURAL RESOURCES
POSITION DESCRIPTION

Working Title: State Dam Safety Engineer
Classification Title: Water Regulation & Zoning Engineer - Advanced
Work Location: Madison, GEF 2

Purpose of the Position:

This statutorily identified position provides statewide leadership and expertise for the Dam Safety Program. The State Dam Safety Engineer is the lead for policy and regulation issues related to the design, construction and safety of dams in the state, and oversees inspection, compliance monitoring, and enforcement activities, in support of the Water Management Engineers who are the primary implementors of the program. The position assures appropriate technical standards are applied in key program areas including hydrologic and hydraulic analyses, structural stability and design and geotechnical analysis and design, and keeps abreast of new technology and standards. The State Dam Safety Engineer will also be responsible for coordination with and support of department staff, especially the Water Management Engineers throughout the state, in the event of an emergency related to a dam, and to coordinate program response activities with the Department of Military Affairs, Division of Emergency Management.

Geographic Scope and Travel Requirements:

This position is located in the Central Office, Watershed Bureau. The position is the statewide lead for dam safety policy and program coordination. Travel throughout the state will be required for inspections, meetings, training, and emergency response activities.

Scope of Authority:

This position reports to the Dams and Floodplain Section Chief and in conjunction with the Section Chief will set program priorities for the dam safety program and assure the successful implementation of the program.

Responsibilities and Accountabilities

- 30%**
- A. Manage and lead the Specialized Functions of the Dam Safety Program**
 - A1. Set overall program priorities in conjunction with the Section Chief
 - A2. Plan, establish and direct performance standards for dam inspections, preparation of enforcement actions and evaluation of design plans for the Water Management Engineers
 - A3. Coordinate with Water Management Engineers to assure that required dam inspection schedule is maintained
 - A4. Coordinate the development of program policy and guidance
 - A5. Assist with application design and review and the state-wide implementation of the dam grant programs
 - A6. Develop the analysis of legislation that may impact the dam safety program
 - A7. Provide expert testimony relative to dam regulation in legal proceedings, as required
 - A8. Coordinate the development of a staff training plan and implementation of training activities for the dam safety program, program staff and external customers.
 - A8. Serve as department liaison on dam safety issues with other state and federal agencies and state and national organizations promoting dam safety

- 15% B. Provide Co-leadership for the Dam/Floodplain Team**
- B1. Set goals and direction for the team in coordination with the co-leader, Section Chief and program specialist
 - B2. Set the agenda and facilitate meetings
 - B3. Track follow-up and provide leadership or support for program related workgroups, to assure progress on priority activities
- 20% C. Coordinate the Review of Dam Related Hydrologic and Hydraulic Analyses Including Dam Failure Analyses**
- C1. Assign review for all new analyses
 - C2. Assist Water Management Engineers with the review of complex analyses, as required.
 - C3. Review/approve assigned dam failure analyses and assign appropriate hazard classification for the dams
 - C4. Maintain appropriate documentation to assist dam owners and consultants develop dam failure analyses consistent with state standards
- 25% D. Provide Technical Support for the Water Management Engineers**
- D1. Oversee and participate, as necessary, in dam inspection, performed by Water Management Engineers
 - D2. Oversee the review of plans and specifications for the construction, repair, reconstruction or removal of dams. Co-review plans when appropriate.
 - D3. Oversee the preparation of enforcement actions for rectifying unsafe conditions at dams or addressing the lack of compliance with inspection requirements or directives.
 - D4. Provide expertise in hydraulic and structural analyses for dam safety program staff.
 - D5. Review activities of program staff to assure consistency in program implementation and decisions.
- 5% E. Coordinate Emergency Response Activities Related to Dam Incidents and Other Department Emergency Response Activities**
- E1. Develop standards and procedures to respond to dam failure incidents in coordination with the DNR Emergency Manager and Wisconsin Emergency Management.
 - E2. Advise field staff, dam owners and local officials when receiving contacts on dam failure emergencies.
 - E3. Assure the appropriate issuance of orders for the immediate steps necessary to reduce the risk of failure from a dam, stabilize the situation, and protect life and property.
 - E4. Provide on-site assistance, if necessary, to provide technical expertise and supervise actions necessary until imminent threat to life, health and property is dissipated.
 - E5. Coordinate and help implement the Continuation of Operations Plan (COOP) for the Bureau of Watershed Management
- 5% F. Organizational Responsiveness**
- F1. Review and keep abreast of changes in knowledge and practices of position-related activities in responsibilities.
 - F2. Participate in job-related training and organizational meetings as assigned by supervisor.

- F3. Prepare forms and reports as necessary for personnel and budget accounting purposes in a timely manner.
- F4. Perform other position-related duties as assigned.
- F5. Follow all general and position-related safety requirements.

Position Requirements

Registration as a Professional Engineer in Wisconsin (P.E.) or ability to attain registration within 6 months of appointment.

Knowledge, Skills, and Abilities

1. Skill in hydrologic and hydraulic analyses modeling techniques.
2. Skill in developing and reviewing hydrologic and hydraulic models including dam failure analyses.
3. Skill with dam design standards.
4. Skill with dam inspection techniques
5. Skill with Geographic Information Systems
6. Skill in emergency response protocols including Incident Command Systems (ICS) and the National Incident Management System (NIMS)
7. Skill in serving as a lead technical expert for field staff, establishing protocols, directing activities and reviewing work
8. Knowledge of state and federal dam design standards and requirements.
9. Skill with development of guidance or manuals to document policies and procedures and interpret rules and regulations.
10. Skill in providing technical training.
11. Knowledge of written and oral communication techniques
12. Knowledge of Chapter 31 and 30, State Statutes and Administrative Codes NR330, NR333, NR335, NR336 and NR116
13. Ability to interpret and apply statute, administrative code and program guidance requirements related to dams and dam safety
14. Knowledge of Wisconsin judicial system and court procedures

Physical Requirements and Environmental Factors

Strength Requirements. Sedentary work (exerting up to 10 pounds of force occasionally and/or a negligible amount of force frequently) about 60% over a year's time.

Light work (exerting up to 20 pounds of force occasionally and/or up to 10 pounds of force frequently) less than 40% over a year's time.

Physically, this position will spend approximately 80% or more of time indoors. The position requires bending at the waist, kneeling, crouching, climbing, balancing, lifting, carrying, reaching, handling, sitting, standing, talking, hearing, seeing (clarity of vision at 20 feet or more, clarity of vision at 20 inches or less), walking on foot.

Environmental Factors: May need to frequently spend more than one hour outdoors in temperatures below 32 degrees, above 80 degrees and in harsh weather conditions. Ability to traverse uneven ground, steep grades and heavy brush.

Equipment Used: Office equipment, Car/truck; GPS units; range finder, soil probes surveying equipment, range pole, camera, mallet field book, personal flotation device, hard hat, rain gear, waders, boots, steel toed boots.

Telework Evaluation: Some portions of this position may be suitable for teleworking.